

two-dimensional areas. Applicant requests, therefore, that this rejection be withdrawn.

Claims 1-10, 12, 24, and 25 stand rejected under 35 USC § 102(a) for being anticipated by the Fall 1993 issue of *LaserPulse* and the unnumbered page entitled "4420 Laser Micro Machining System" ("4420 brochure") published by Electro Scientific Industries, Inc. Applicant responds to this rejection as follows.

Applicant notes that these references were published within one year of the U.S. filing date, and the relevant subject matter disclosed in the references was derived from the inventor. MPEP § 715.01(c) indicates that "a rejection on a publication may be overcome by a showing that it was published either by applicant himself or in his behalf. *Ex parte Lemieux*, 1957 C.D. 47, 725 O.G. 4; *Ex parte Powell et al.*, 1938 C.D. 15; 489 O.G. 231." Accordingly, declarations have been provided from inventor, Mark D. Owen, and coordinator, Roger Dwight, of the *LaserPulse* publication attesting to its derivation from Mr. Owen. The 4420 brochure states that "[the laser] solves problems associated with smaller vias, finer lines and new materials, allowing manufacturers to achieve new levels of micromachining accuracy and control." The brochure makes no further mention of via drilling, does not specify the parameters used to trim the single-material copper or polyimide targets shown in the photographs, and does not indicate whether the parameters are the same for both trimming operations. Moreover, the brochure does not disclose simultaneous or sequential multimaterial via drilling. Applicant requests, therefore, that this rejection be withdrawn.

Claim 11 stands rejected under 35 USC § 103 for being unpatentable over the Fall 1993 issue of *LaserPulse* as applied to claims 1-10, 12, 24, and 25

above, and further in view of U.S. Patent No. 4,761,786 to Baer. Applicant responds to this rejection as follows.

Applicant believes that the *LaserPulse* publication has been effectively removed as prior art as previously discussed. The removal of this publication undermines the combination of references supporting the obviousness rejection. Furthermore, claim 11 depends on what applicant believes to be an allowable base claim and is, therefore, allowable. Applicant requests, therefore, that this rejection be withdrawn.

Claims 13, 15, 26, and 27 stand rejected under 35 USC § 103 for being unpatentable over the Fall 1993 issue of *LaserPulse* as applied to claims 1-10, 12, 24, and 25 above, and further in view of U.S. Patent No. 4,894,115 to Eichelberger et al. The Examiner states that "Eichelberger teaches a method of forming vias by laser ablation which includes using a beam with a spatial spot size smaller than a spatial region of the target, and directing the beam to multiple positions within the spatial region to remove multiple amounts of material. The beam is applied along a periphery (130) of the via. Eichelberger teaches that the above method allows vias of various sizes and shapes to be formed as desired. See col. 3, lines 19-23." Applicant responds to this rejection as follows.

Applicant believes that the *LaserPulse* publication has been effectively removed as prior art as previously discussed. The removal of this publication undermines the combination of references supporting the obviousness rejection. Applicant notes that Eichelberger discloses a relatively slow, raster scanning-type approach to make square-shaped, blind vias within single-material polymers. Furthermore, these claims depend on what applicant believes to be an allowable base claim and are,

therefore, allowable. Applicant requests, therefore, that this rejection be withdrawn.

Claims 16 and 17 stand rejected under 35 USC § 103 for being unpatentable over the Fall 1993 issue of *LaserPulse* in view of Eichelberger as applied to claims 13, 15, 26 and 27 above, and further in view of U.S. Patent 3,931,458 to Dini. The Examiner states that "Dini discloses a laser etching method which includes moving the beam outwardly from a central portion of a region in a spiral path. Dini teaches that the depth of etching may be easily controlled by controlling the tightness of the spiral." Applicant responds to this rejection as follows.

Applicant believes that the *LaserPulse* publication has been effectively removed as prior art as previously discussed. The removal of this publication undermines the combination of references supporting the obviousness rejection. Applicant also refers to the preceding discussion of Eichelberger and further notes that the system of Eichelberger is incapable of performing a circular spiral. Dini is directed toward etching the surface of printheads. Furthermore, these claims are dependent upon what applicant believes to be an allowable base claim and are, therefore, allowable. Applicant requests, therefore, that this rejection be withdrawn.

Claims 22 and 23 stand rejected under 35 USC § 103 for being unpatentable over the *LaserPulse* reference. Applicant responds to this rejection as follows.

Applicant believes that the *LaserPulse* publication has been effectively removed as prior art as previously discussed. Claim 22 has been amended to recite "a single" instead of "each" and "material from" at least two layers. These claims are dependent upon what applicant believes to be an allowable base claim and are, therefore, allowable.

Applicant requests, therefore, that this rejection be withdrawn.

Applicant has added new claims 28-30. These claims are dependent upon what applicant believes to be an allowable base claim and are, therefore, allowable.

Applicant has provided a petition to correct inventorship and the associated documents and fees required to add James N. O'Brien as an inventor.

Applicant believes that his application is in condition for allowance and respectfully requests the same.

Respectfully submitted,

Mark D. Owen

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